

CLAIMS

What is claimed is:

- 1 1. A mobile server comprising:
2 a master server portion to communicate server data wirelessly; and
3 a virtual server portion coupled to the master server portion through a
4 support node to communicate the server data and service a client request via
5 wireline.
- 1 2. The mobile server as claimed in claim 1 wherein:
2 the master server portion is part of a wireless communication device that
3 communicates through base stations to the support node coupled with a data
4 network, and
5 the virtual server portion is wireline coupled with the data network.
- 1 3. The mobile server as claimed in claim 2 wherein the support node to
2 receive the client request from a client device over the data network addressed to the
3 mobile server, and the support node to route the client request to the virtual server
4 portion to service the client request.
- 1 4. A mobile server as claimed in claim 3 wherein the wireless
2 communication device to communicate in accordance with a packet radio service
3 communication format and the service node to convert data packets between the
4 packet radio service communication format of a wireless communication system and
5 a data packet format of the data network.
- 1 5. The mobile server as claimed in claim 2 wherein the master server
2 portion and the virtual server portion each comprise:
3 Web-page data;

4 client data; and
5 server data,
6 wherein when the wireless communication device is in communication with
7 one of the base stations, the support node to provide an update to the client data in
8 the master server portion, the update buffered the virtual server portion.

1 6. The mobile server as claimed in claim 5 wherein when the wireless
2 communication device is in communication with one of the base stations, the master
3 server portion to provide an update to the server data and the Web-page data of the
4 virtual server portion.

1 7. The mobile server as claimed in claim 5 wherein the virtual server portion
2 to provide the Web-page data to client devices over the data network using an
3 internet communication protocol in response to the client requests both when the
4 wireless communication device is in communication with one of the base stations
5 and when the wireless communication device is not in communication with one of
6 the base stations.

1 8. The mobile server as claimed in claim 1 wherein the mobile server has a
2 private network address and a public network address associated therewith, and
3 wherein:

4 the support node to route data packets that have the public network address
5 as a destination address to the virtual server portion;

6 the support node to route data packets that have the private network address
7 as a destination address to the master server portion; and

8 the support node to route data packets that have a network address of the
9 virtual server portion to the virtual server portion.

1 9. The mobile server as claimed in claim 8 wherein:
2 the data packets having the public address as the destination address
3 comprise the client request,
4 the data packets having the private network address as the destination
5 address comprise updates to client data from the virtual server portion intended for
6 the master server portion, and
7 the data packets having the network address of the virtual server portion
8 comprise updates to server data from the master server portion intended for the
9 virtual server portion.

1 10. A system that provides mobile server service comprising:
2 a mobile server to service client requests, the mobile server comprising a
3 virtual server portion to operate in a wireline data network and a master server
4 portion to operate in a wireless communication system; and
5 a support node to route client requests received through the wireline data
6 network to the virtual server portion for servicing, and to convert data packets
7 between a wireless packet radio format of the wireless communication system and a
8 wireline data network format of the wireline data network.

1 11. The system as claimed in claim 10 wherein the mobile server comprises
2 client data and server data, the master server portion to update the server data on the
3 virtual server portion when the master server portion is in communication with the
4 wireless communication system, the virtual server portion to update the client data
5 on the master server portion when the master server portion is in communication
6 with the wireless communication system.

1 12. The system as claimed in claim 11 wherein the virtual server portion to
2 buffer updated client data until the master server portion is in communication with
3 the wireless communication system.

1 13. The system as claimed in claim 11 wherein the server data comprises a
2 Web page, the virtual server portion to provide the Web page to a client device in
3 response to a client request over the wireline data network.

1 14. A method for providing mobile server services from a wireless
2 communication device comprising:
3 receiving server data for a virtual server portion of a mobile server from a
4 master server portion of the mobile server through a wireless network;
5 routing a client request for server service to the virtual server portion; and
6 servicing the client request by the virtual server portion providing at least
7 some of the server data,
8 wherein the master server portion resides in the wireless communication
9 device and communicates the server data wirelessly, and the virtual server portion is
10 coupled via wireline to a data network

1 15. The method as claimed in claim 14 further comprising receiving the
2 client request through the data network, and wherein the virtual server portion
3 resides in a fixed location.

1 16. The method as claimed in claim 15 further comprising:
2 receiving the client request at a support node, the support node providing an
3 interface between the wireless network and the data network, the wireless network
4 supporting wireless packet radio communications; and
5 communicating the server data through the wireless network from the
6 wireless communication device to the support node.

1 17. The method as claimed in claim 16 further comprising:
2 receiving, at the support node, the client request comprising data packets
3 addressed to the mobile server;

4 identifying the client request by the support node as being directed to the
5 mobile server; and
6 routing, by the support node, the client request to the virtual server portion
7 over the data network.

1 18. The method as claimed in claim 14 wherein the servicing comprises
2 providing a Web page to a client device.

1 19. The method as claimed in claim 18 wherein the servicing further
2 comprises allowing the client device access to Web-site data stored on the virtual
3 server portion.

1 20. The method as claimed in claim 15 further comprising receiving the
2 client request directed to the mobile server at a support node supporting wireless
3 packet radio communications with the wireless communication device.

1 21. The method as claimed in claim 14 wherein the client request comprises
2 data packets in accordance with an internet communication protocol.

1 22. The method as claimed in claim 21 wherein the client request comprises
2 a request using a hypertext transmission protocol and is a request from a Web
3 browser operating on the client device to transfer a hypertext markup language file
4 to the client device from the mobile server.

1 23. The method as claimed in claim 14 further comprising buffering updated
2 client data in the virtual server portion until the master server portion is available to
3 receive the updated client data.

1 24. The method as claimed in claim 23 wherein the virtual server portion
2 addresses data packets that comprise the updated client data to a private network

3 address of the mobile server, the support node recognizing the private address and
4 routing the data packets to the master server portion over the wireless network.

1 25. The method as claimed in claim 24 wherein routing the data packets that
2 comprise the updated client data further comprises converting the data packets from
3 a data network format to a wireless packet radio communication system format.

1 26. The method as claimed in claim 14 wherein the mobile server has a
2 private network address and a public network address associated therewith, and
3 wherein the method further comprises a support node:

4 routing data packets that have the public network address as a destination
5 address to the virtual server portion;

6 routing data packets that have the private network address as a destination
7 address to the master server portion; and

8 routing data packets that have a network address of the virtual server portion
9 to the virtual server portion.

1 27. The method as claimed in claim 16 wherein:

2 the data packets having the public address as the destination address
3 comprise the client request,

4 the data packets having the private network address as the destination
5 address comprise updates to client data from the virtual server portion intended for
6 the master server portion, and

7 the data packets having the network address of the virtual server portion
8 comprise updates to server data from the master server portion intended for the
9 virtual server portion.

1 28. A method of operating a server having a master server portion residing
2 in a wireless communication device and a virtual server portion coupled via wireline
3 to a data network, the method comprising:

4 registering with a support node to provide server services, the support node
 5 providing an interface between a wireless network and a data network supporting
 6 packet radio data communications for the wireless communication device over the
 7 wireless network;
 8 transmitting server data to the support node over the wireless network for
 9 routing to the virtual server portion over the data network; and
 10 receiving client data updates from the support node over the wireless
 11 network, the client data updates being routed to the support node from the virtual
 12 server portion over the data network,
 13 wherein requests for server services are provided by the virtual server
 14 portion when the master server portion is unavailable.

1 29. The method as claimed in claim 28 wherein the server has a private
 2 network address and a public network address associated therewith, and wherein the
 3 method further comprises the wireless communication device transmitting a request
 4 to activate the server services, and in response to an activation, the support node
 5 routes data packets received from client devices that have the public network
 6 address as a destination address to the virtual server portion.

1 30. The method as claimed in claim 29 wherein in response to the
 2 activation, the support node routes data packets from the virtual server portion that
 3 have the private network address as a destination address to the master server
 4 portion, and routes data packets from the master server portion that have a network
 5 address of the virtual server portion to the virtual server portion.